

ABSTRACT OF THE DISCLOSURE

A distributed bus differential relay system has a separate differential relay element at each feeder location to trip the associated circuit breaker in response to a fault in the protected bus. The only conductors between feeders form a set of leads connecting current transformers in each of the feeders in parallel. Preferably, the current transformer in each feeder also serves as the current transformer for the associated circuit breaker and the differential relay element is incorporated into the overcurrent relay or trip unit of the circuit breaker which is implemented by a microprocessor. Compliance voltage across the cts is limited by a varistor or saturating reactor which is protected from overheating by a time delayed shorting device.